LIGHT EMITTING STYLUS AND USER INPUT DEVICE USING SAME

Abstract

The present invention provides a user input device that includes and array of light detectors and a light emitting stylus configured to emit a beam of light detectable by the light detectors. The light beam is wide enough at the plane of the detectors so that at least two detectors are illuminated for all positions of interest. This allows the light beam position to be interpolated to obtain positional resolution that is greater than would be expected simply due to the spacing between detectors. Interpolation can be further aided by using a light beam that has a known variance in cross-sectional intensity. The present invention also provides for determining the orientation of the stylus by comparing the detected shape of the light beam cross-section to the known shape of the light beam cross-section.